ECONOMIC OUTLOOK

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COUNTY AUDITOR
1ST QTR 2016

AUSTIN

Growth in the Austin economy has continued to expand steadily. The current 3.1% unemployment rate prompted the Dallas Fed to note that "Such a low jobless rate was last seen during the peak of the late 1990s high-tech boom and reflects the severe shortage of skilled workers in the area." "Aside from year-end weakness in manufacturing, all major industries added jobs" for the three months ending in January 2016. Austin "manufacturing posted further declines as the strong dollar continued to put pressure on exporters."

TEXAS

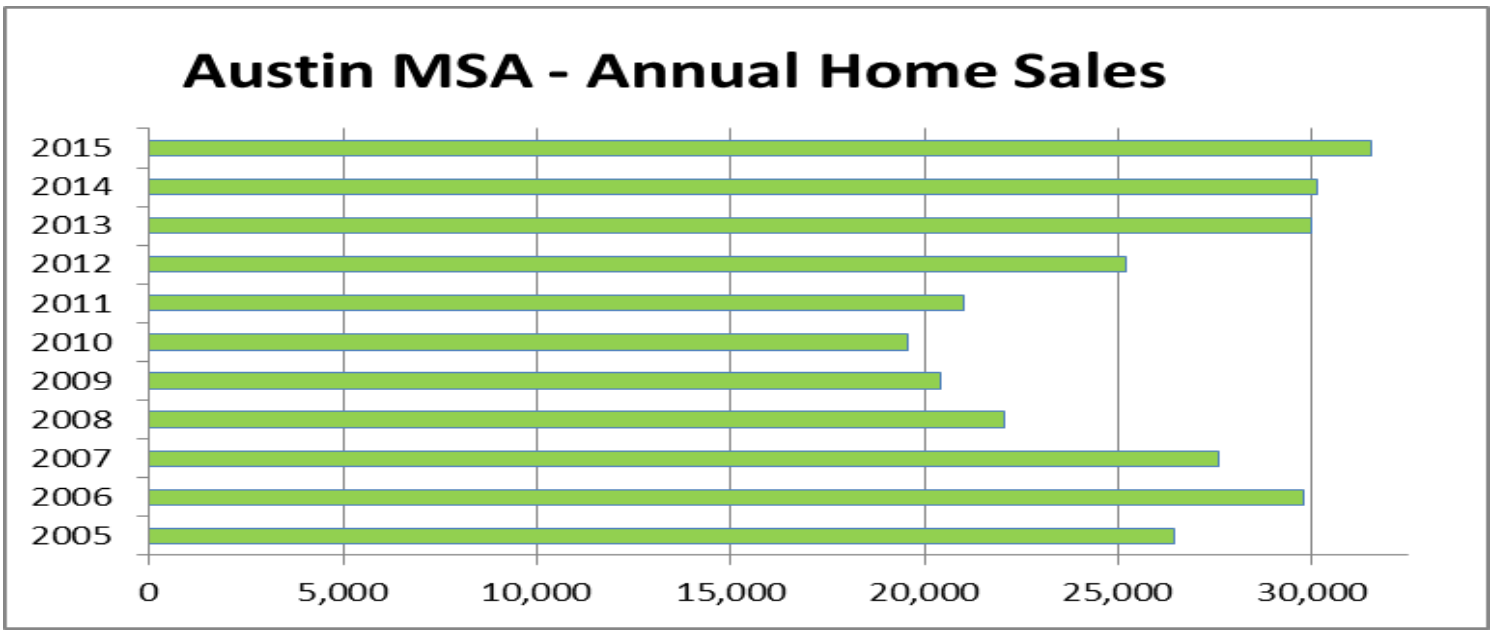
The Texas economy continues to grow in the face of a strong dollar and lower oil prices. The price of oil is the main reason that March year-to-date tax collections are down $1.474B or 5.82% to prior year. The Dallas Fed reported in late March that "The Texas economy moderated in February. Payroll employment inched up during the month, and unemployment ticked down. Home sales fell while total construction contract values grew in February. January exports declined, and the estimated value of the Texas Leading Index fell for the fourth consecutive month in February."

UNITED STATES

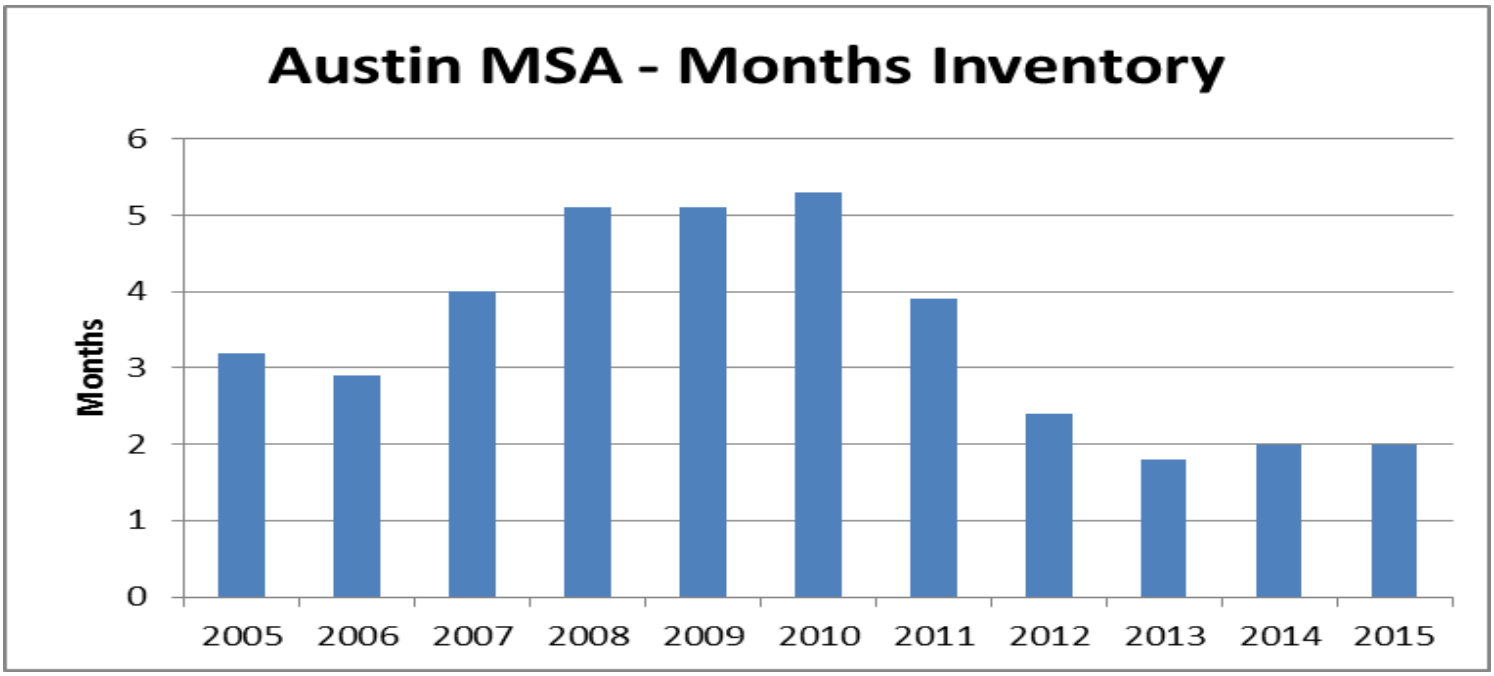
Daniel Lin, a research analyst at the Federal Reserve Bank of Dallas reported in early March that "Economic data released in the past six weeks point to moderate U.S. economic growth in first quarter 2016. Improving job prospects, low debt burdens and low oil prices are sustaining private consumption, a major component of growth. On the other hand, a strong dollar, weak global outlook, manufacturing sector contraction and volatile financial markets remain headwinds in the near term."

HOUSING

On the next couple of pages are the Annual Home Sales, Months Inventory, Sales Price, and Price Distribution graphs inclusive of Austin's Multiple Listing Service (MLS) 2015 data. The graphs speak for themselves (high demand + low inventory = higher prices).



Source: Real Estate Center at Texas A&M University



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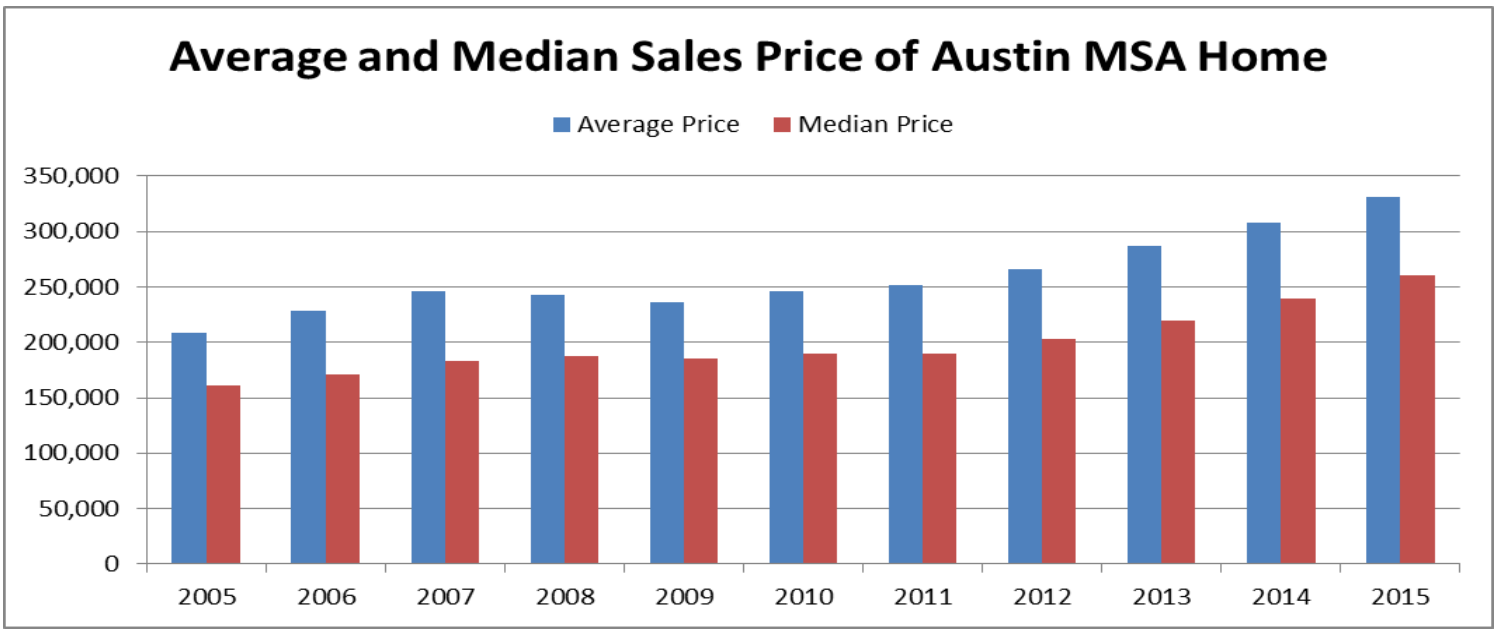
HOUSING



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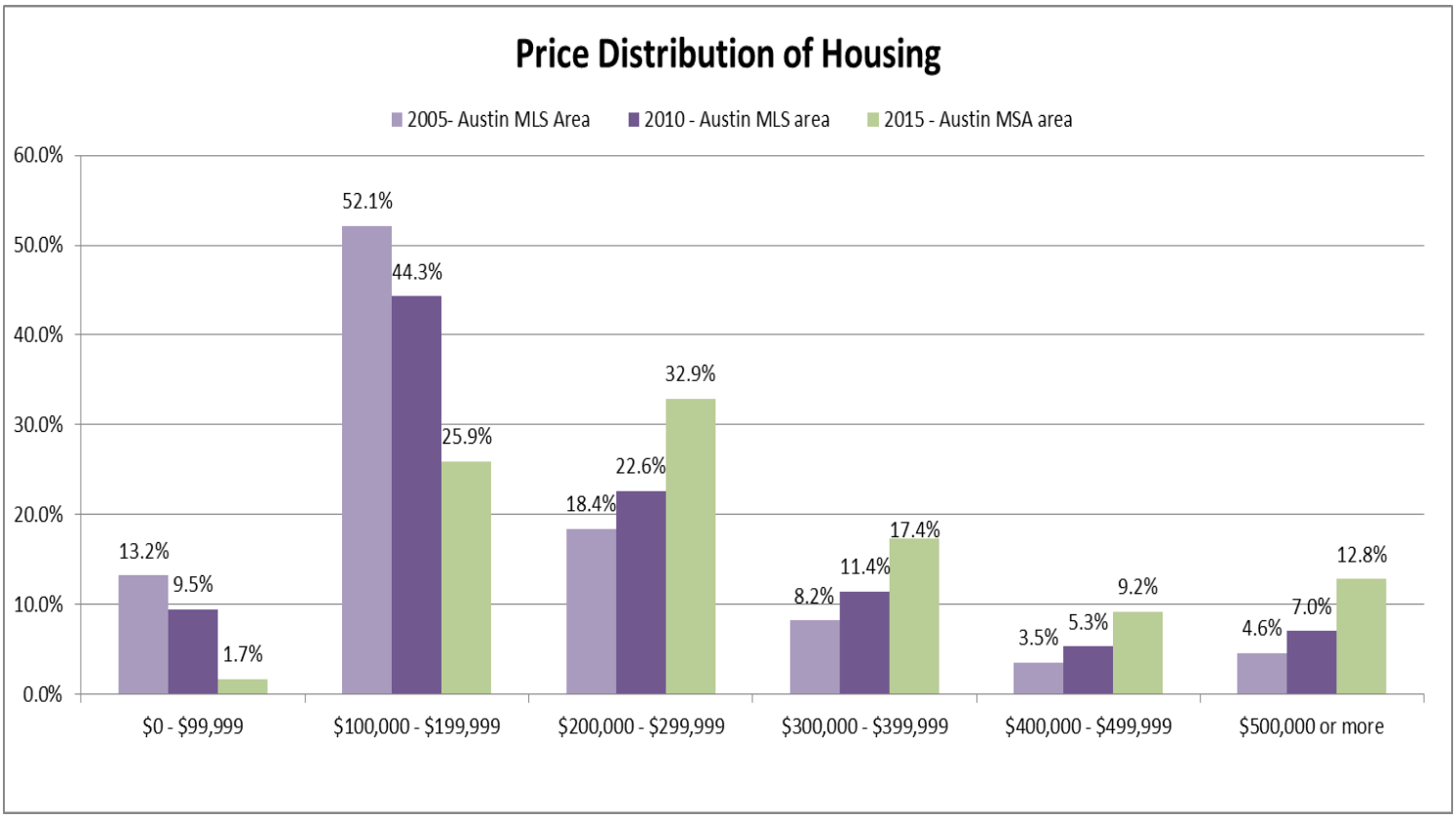


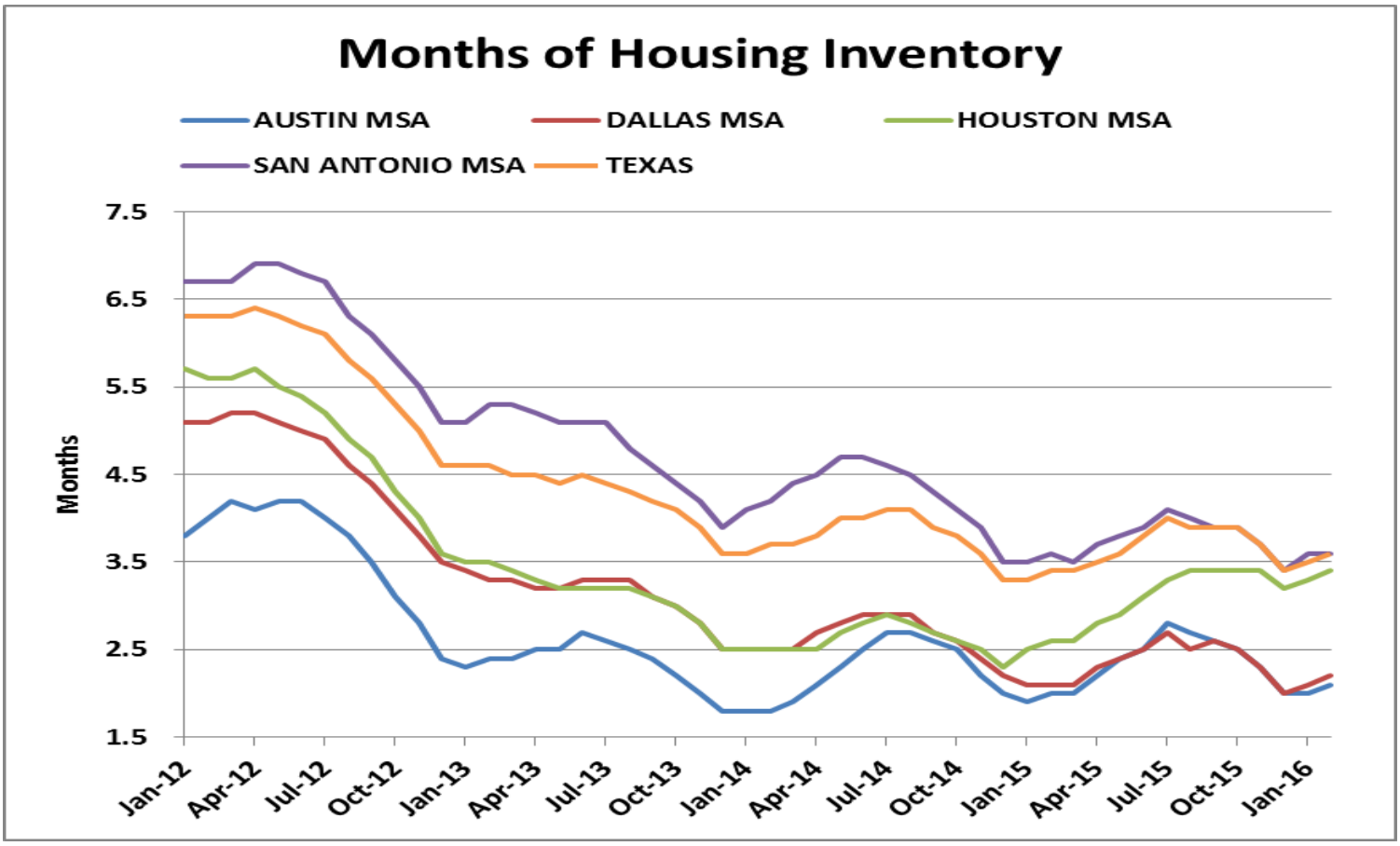
Source: Real Estate Center at Texas A&M University

Percentages may not equal 100% due to rounding

HOUSING

According to the Real Estate Center (REC), "Overall, total Texas housing sales have slowed in the past few months and sales growth has lagged the nation's growth rate." Texas housing inventory has increased from 3.4 months in December to 3.6 in February. The REC has estimated that **"seasonally adjusted; around 6.5 months of inventory is considered a balanced housing market in which neither sellers nor buyers dictate prices**." The Austin MSA had a lean 2.1 months of housing inventory in February. This suggests continued strong demand.

The Austin Business Journal reported in March 2016 that "The median Austin home sold in 2011 was 13.2 miles from the city center. Four years later, that distance had grown to 14.8 miles. Austin's [12.1] percent increase was the second highest among the 31 U.S. cities studied by Redfin." It also noted that "In Austin, it costs $318 per square foot to live in the urban core while the suburbs are much cheaper at $128 per square foot. Nationally, the median price per square foot in 2015 was $148, but was nearly double in urban centers at $284."



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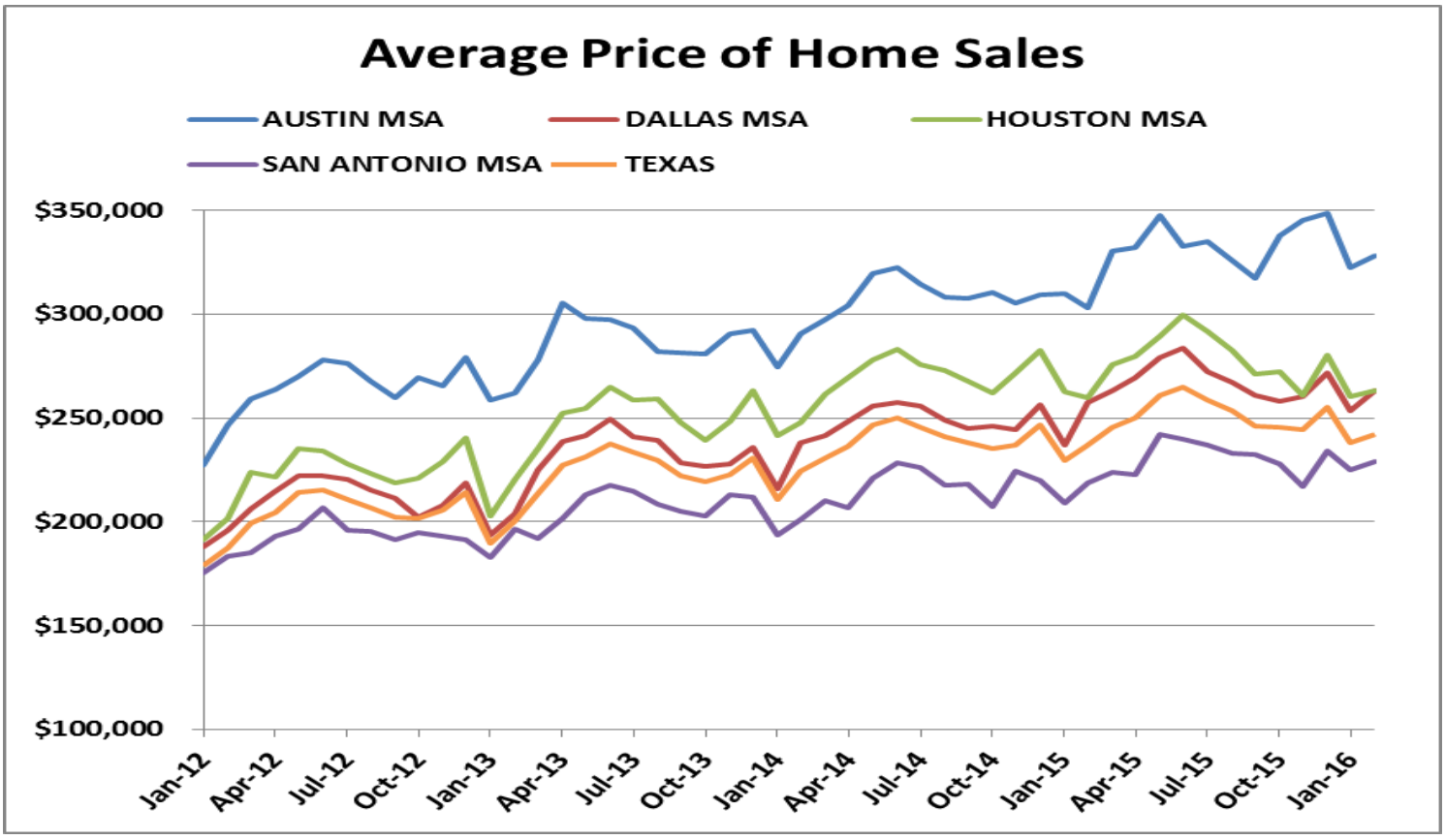

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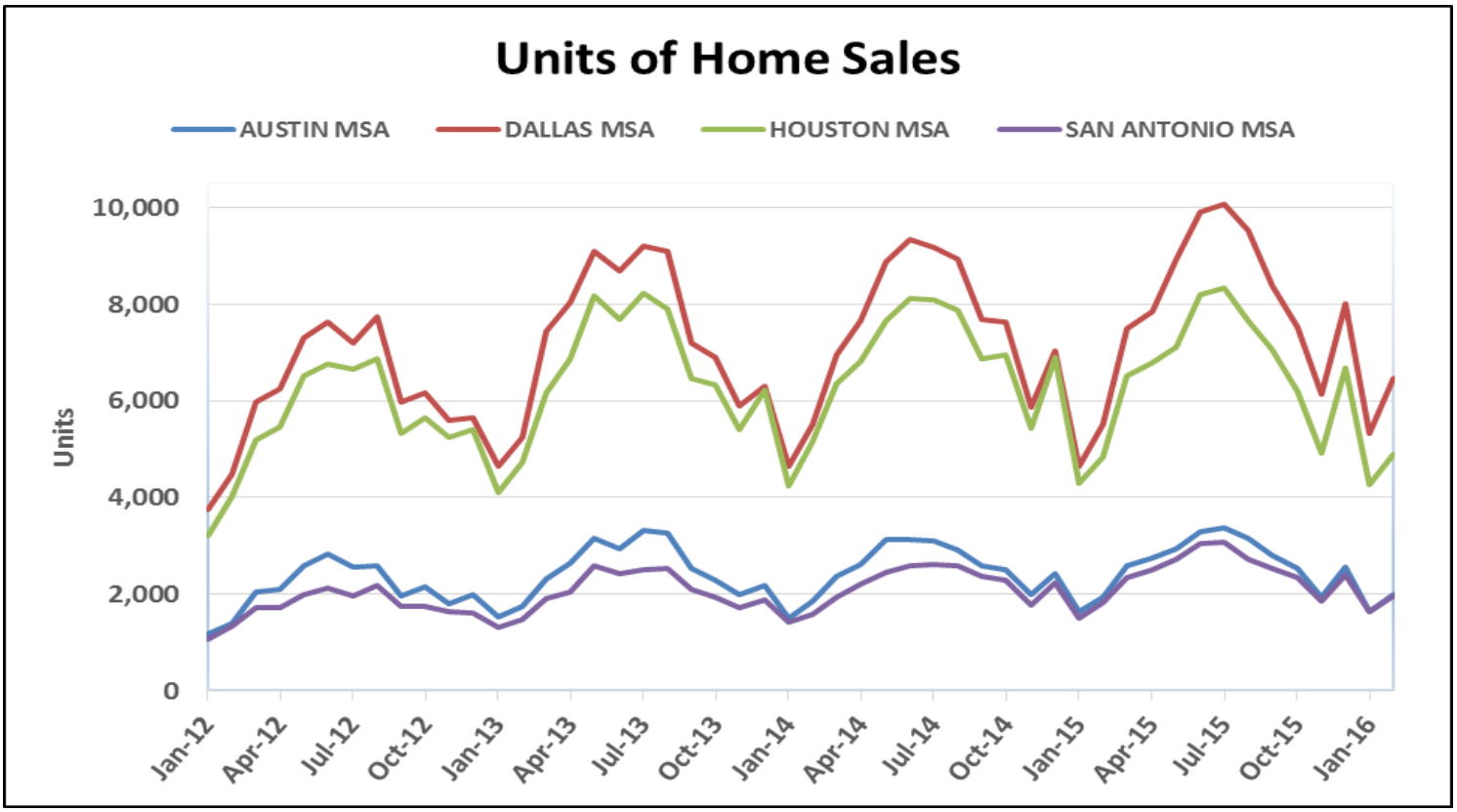
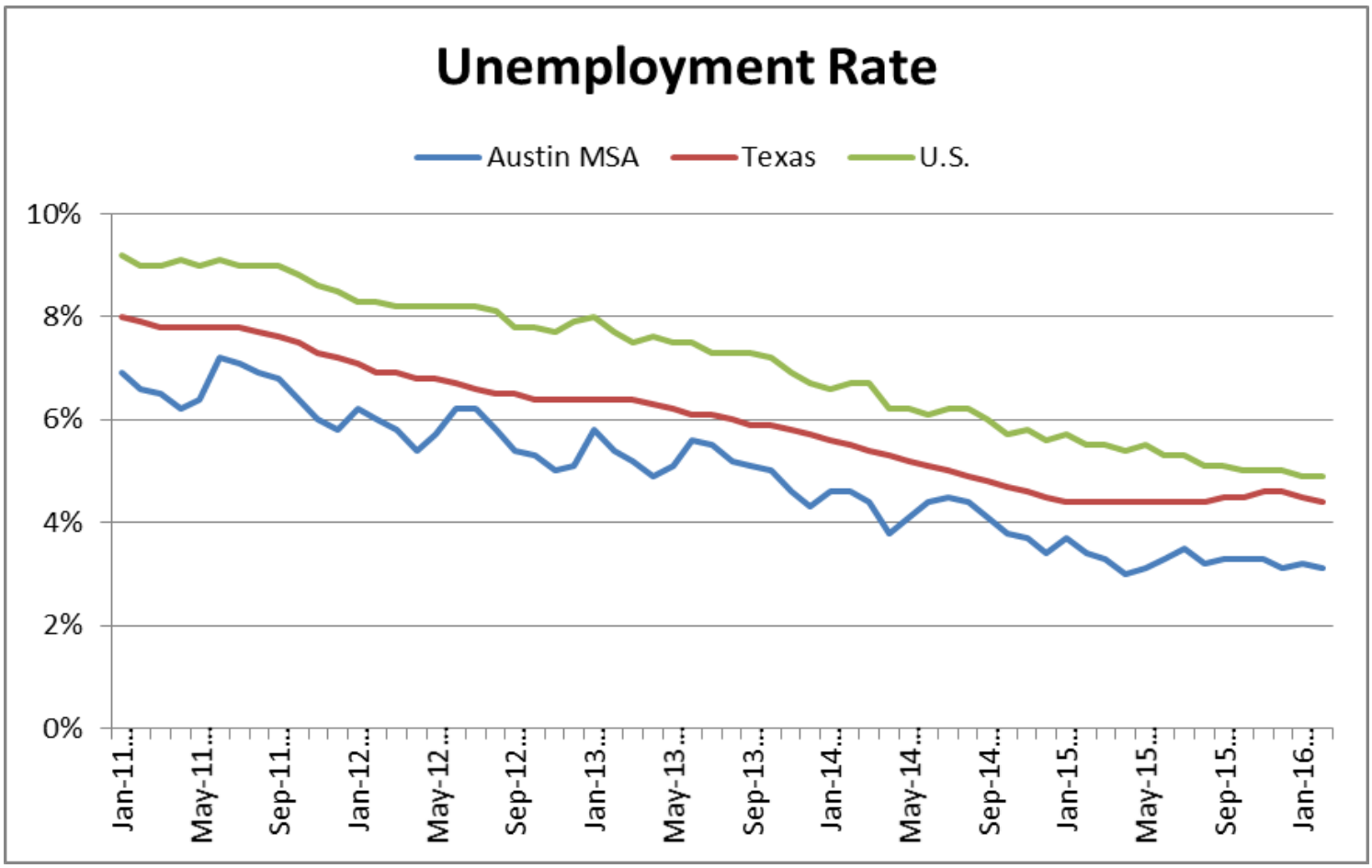


Source: Real Estate Center at Texas A&M University

JOBS

In reflecting on the prior year, the Federal Reserve Bank of Dallas, noted that "In 2015, strong expansion in areas such as leisure and hospitality, technical services and construction fueled the fastest pace of job growth in Austin since 2006."

The February 2016 Austin MSA unemployment rate is 3.1%. This number is flat to the December rate. The Austin MSA unemployment rate compares favorably to both the preliminary Texas unemployment rate of 4.4% and the U.S. rate of 4.9%. The Texas unemployment rate has been at or below the national rate for over nine years.

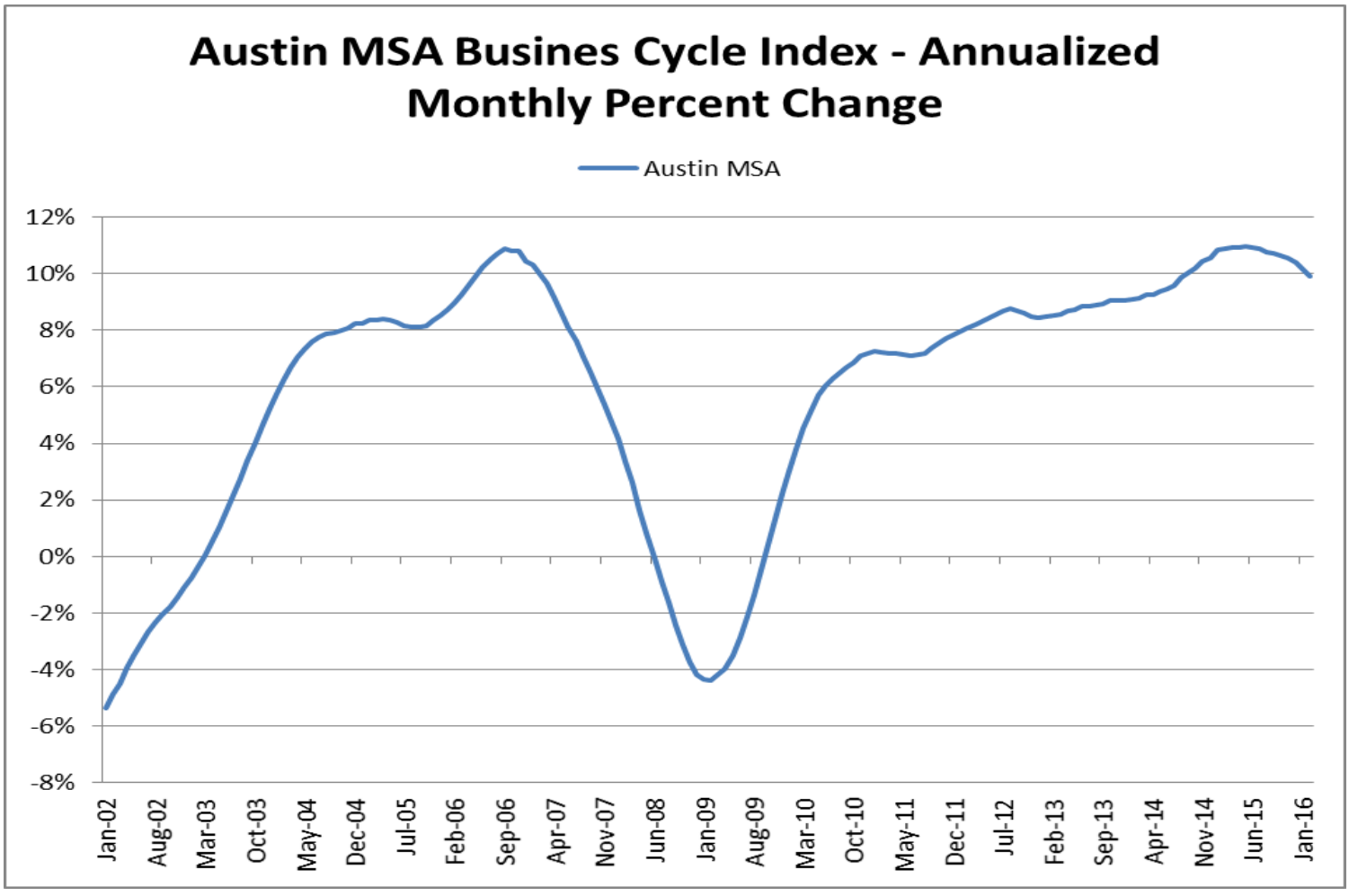


Note: U.S. and Texas seasonally adjusted, Austin MSA not seasonally adjusted.
Source: Bureau of Labor Statistics

BUSINESS CYCLE INDEX – AUSTIN MSA

Business Cycle Indexes are meant to reflect broad movements in local economic conditions. The Dallas Fed states that "the [local area] indexes are constructed based on the aggregated movements in the local area unemployment rate, nonagricultural employment, inflation-adjusted wages, and inflation-adjusted retail sales. The weights of the components are statistically optimized for each metropolitan area in order to best capture the underlying cyclical movements in the local area economy."

The Austin MSA grew at an annualized rate of 10% in February 2016. This number is solidly above its 30 year compounded annual growth rate of 5%.

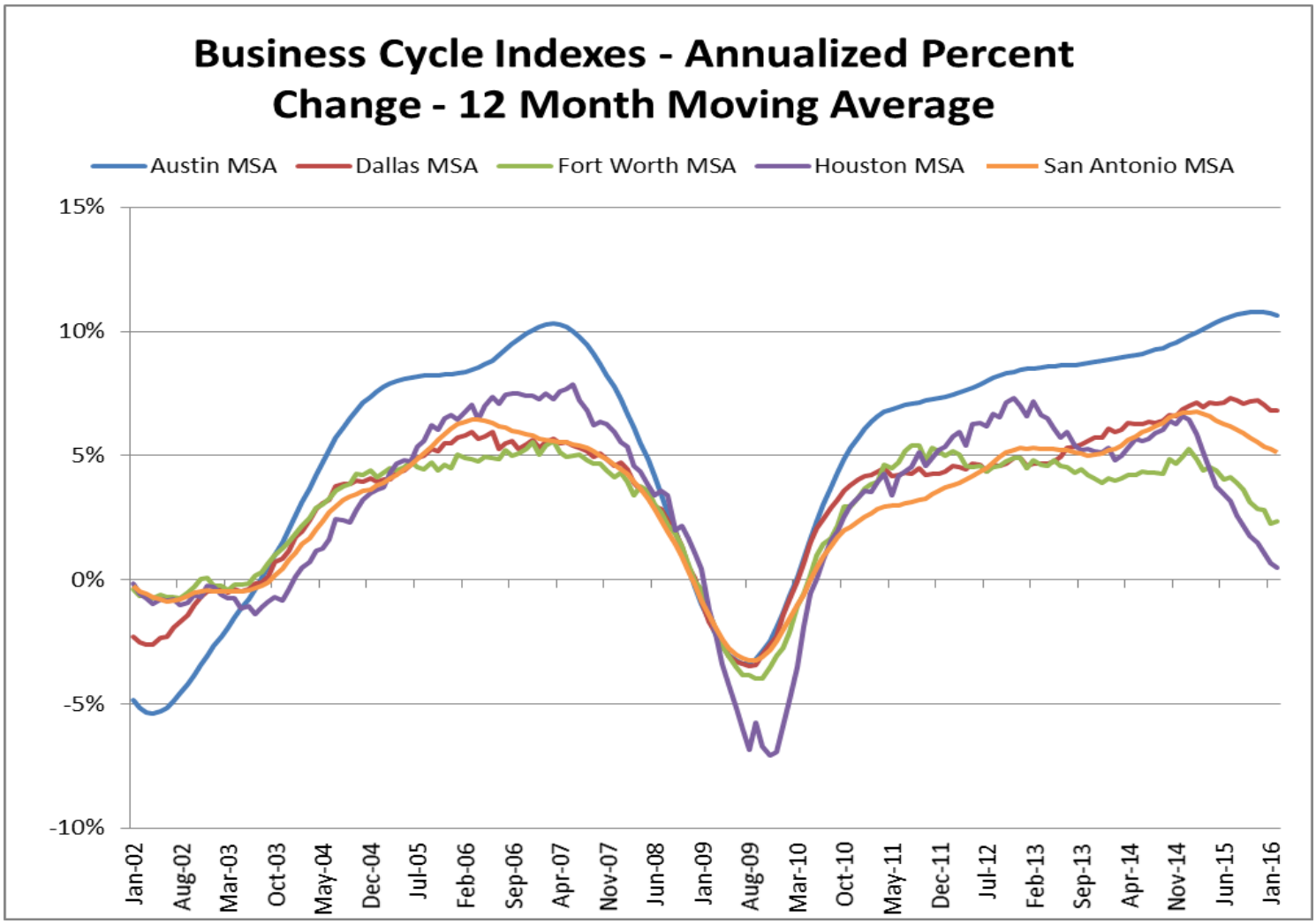


Month-over-month annualized rate, seasonally adjusted

Source: Federal Reserve of Dallas – Index,1980 = 100

BUSINESS CYCLE INDEX – MAJOR METROS

In the chart below, a twelve month moving average was incorporated to smooth out short-term fluctuations and highlight longer-term cycles. The impact of lower oil prices has reduced the growth of Houston's local economy. Ft. Worth which has been trending down for several months may have plateaued "as a result of continued job creation and low unemployment."- Dal Fed.

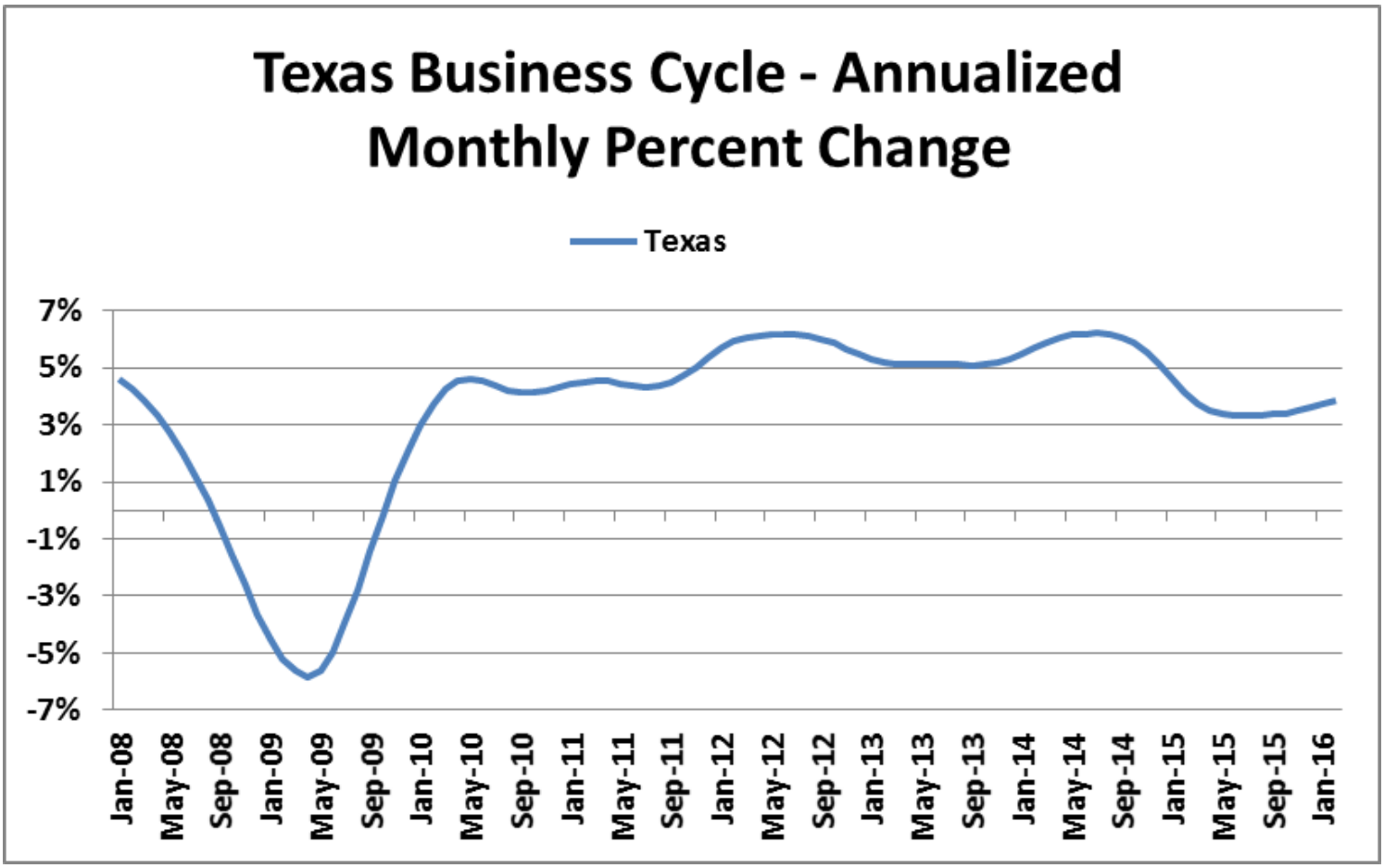


Source: Federal Reserve of Dallas

Source: Federal Reserve of Dallas – Index,1980 = 100

BUSINESS CYCLE INDEX - TEXAS

The **Texas Business Cycle Index** measures the current state of the Texas economy. The Dallas Fed constructed the index using payroll employment, gross state product, and the unemployment rate. The Dallas Fed notes that "The Texas Business-Cycle Index points to continued expansion. The index rose an annualized 3.9 percent in February, following a 3.8 percent increase in January. Growth in the index has gradually strengthened since August 2015. Year over year in February, the index is up 3.6 percent."

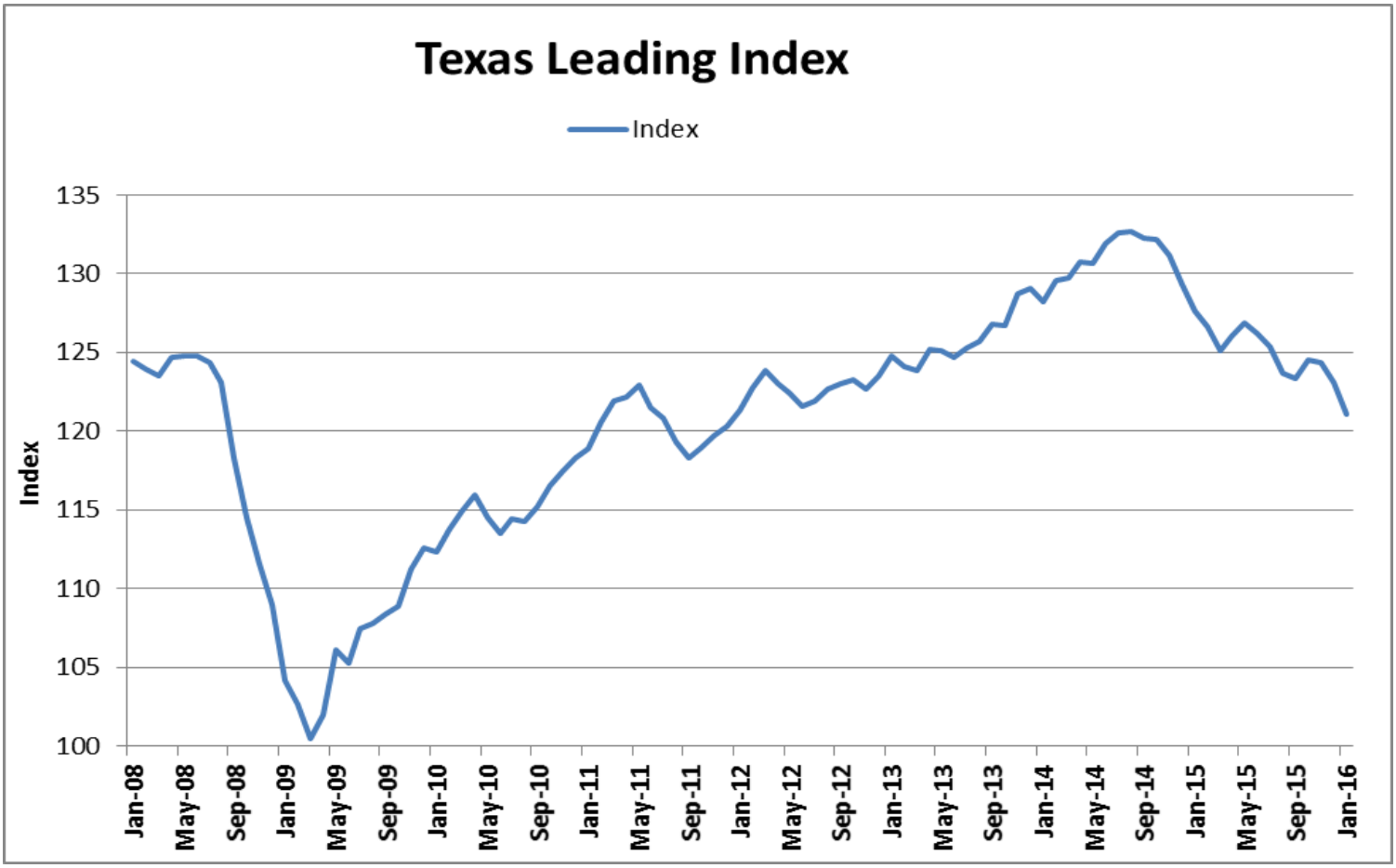


Source: Federal Reserve of Dallas – Index,1987 = 100

LEADING INDEX - TEXAS

Dallas Fed has defined the **Texas Leading Index** as the "single summary statistic that sheds light on the future of the state's economy." The Texas Leading Index is made up of eight leading indicators that have been shown to change direction – up or down – before the overall economy. The eight indicators used by the Dallas Fed are the Texas value of the dollar, U.S. leading index, real oil price, well permits, initial claims for unemployment insurance, Texas stock index, help-wanted index and average weekly hours worked in manufacturing. Caution is warranted as the Index has declined every month from November 2015 – January 2016 and has dropped in 14 of the past 17 months.

In commenting on the January number, the Dallas Fed said "A decline in average weekly hours, the help-wanted index, stock prices of Texas-based companies, oil prices and well permits depressed the index estimate, while a decline in new unemployment claims contributed positively."



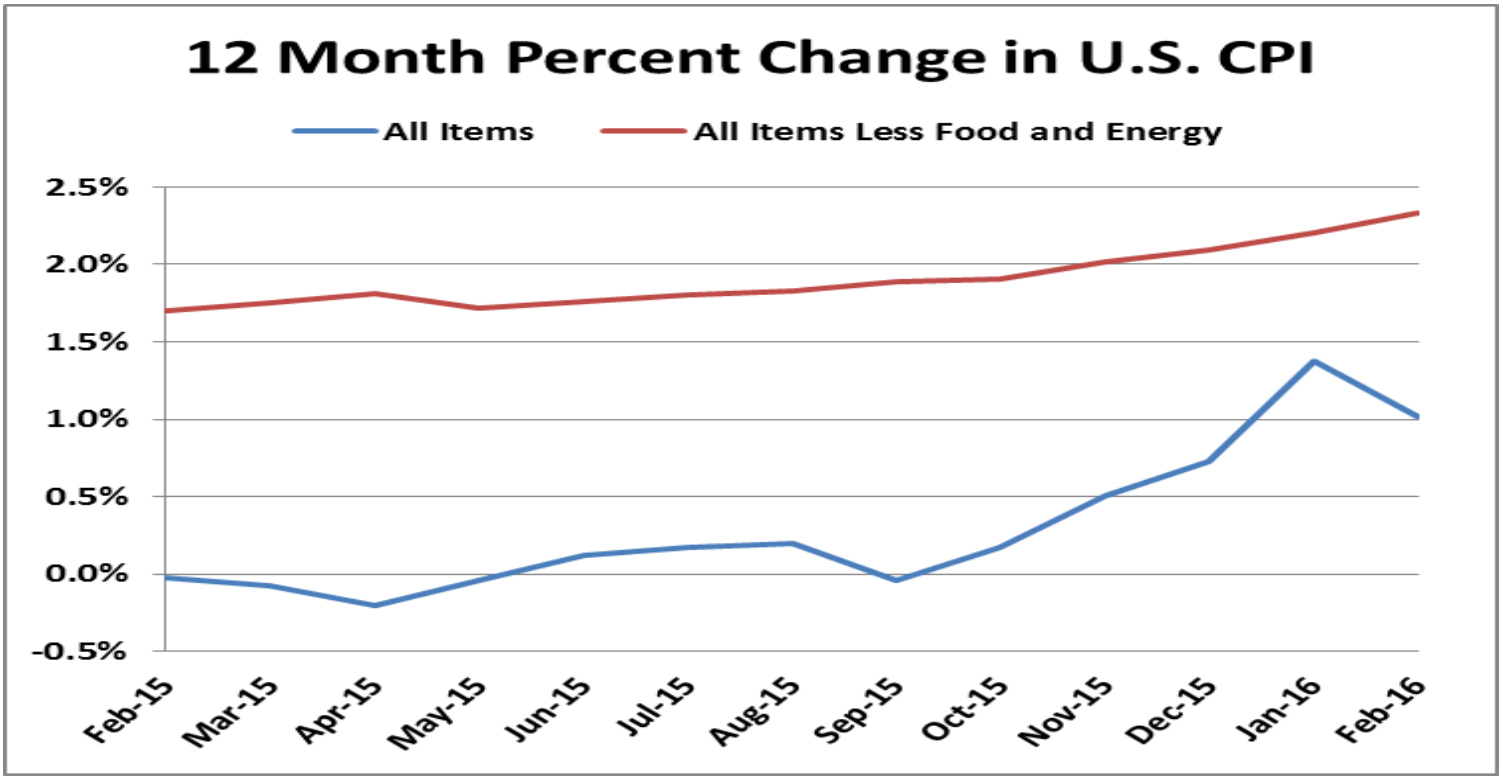
Source: Federal Reserve of Dallas – Index,1987 = 100

CONSUMER PRICE INDEX

According to the Bureau of Labor Statistics (BLS), "The Consumer Price Index (CPI) is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services." Basically, the CPI measures inflation as experienced by 87% of the total U.S. population in their day-to-day living expenses.

There are a variety of CPI numbers generated each month. In the graph below two numbers are compared. The first is the 'Official CPI Number" that is reported to the media. It is the broadest and most comprehensive CPI and is called the All Items CPI for All Urban Consumers. The second one is called the "All items less food and energy". The BLS mentions that "Some users of CPI data use this index because food and energy prices are relatively volatile, and these users want to focus on what they perceive to be the "core" or "underlying" rate of inflation."

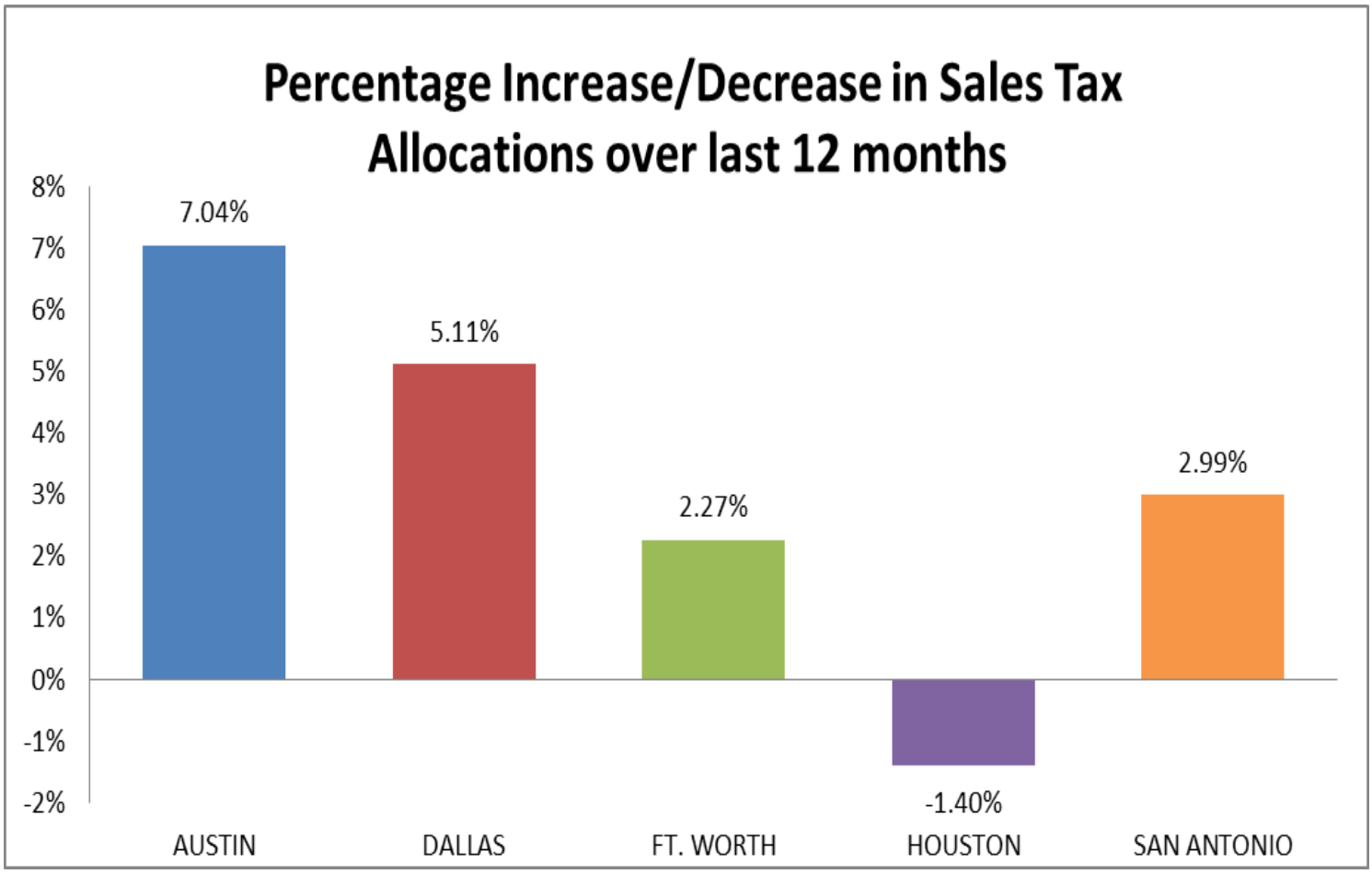
The overall "headline" inflation reached 1% in February. Core inflation reached 2.3% in February, its highest level since May 2012. The increase in "core" inflation may be related to the $4T of Quantitative Easing unleashed in prior years. For an overview of Quantitative Easing please see the IN-DEPTH section at the end of this report.



Source: Bureau of Labor Statistics, not seasonally adjusted, 1982-84=100

SALES TAX - METRO

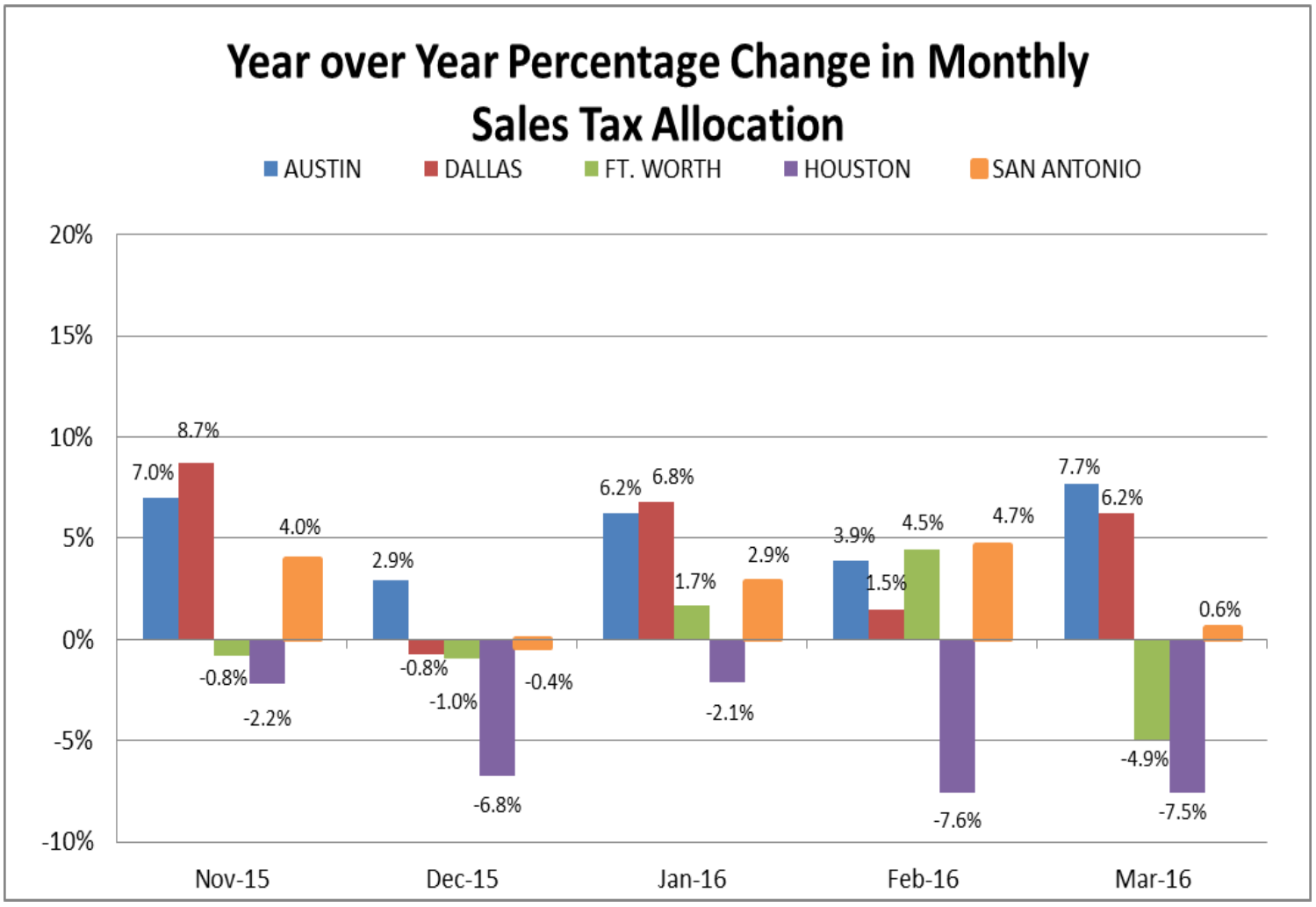
The Percentage of Increase/Decrease over the last 12 months in Sales Tax Allocations from the State of Texas for the five major cities are presented below. The City of Austin experienced the largest growth and Houston saw the biggest drop. Houston's 12 month rolling sales tax allocation is down to prior year.



Source: Texas Comptroller of Public Accounts

SALES TAX - METRO

Below is a chart that reflects the major cities year over year monthly percentage change in Sales Tax Payments received from the State. For clarification, the payments received are generally two months in arrears. For example, the majority of the payment received in December was for monies collected in October and reported to the State in November. As reflected in the chart below, Austin continues to have strong year over year growth.



Source: Texas Comptroller of Public Accounts

TAXES - TEXAS

Below are the Total Tax Collections for the **General revenue-related funds** through the first six months of the State's fiscal year. In FY 2015, Total Tax Collections represented close to 88% of the Total Net Revenue for the General revenue-related funds.

Texas Comptroller Glenn Hegar blamed the year over year drop in sales tax on declining purchases by oil and gas drilling companies. The falling oil and gas severance taxes are a major concern. In preparing the biennial revenue estimate, Hegar predicted that oil would average $64.52 a barrel in fiscal year 2016 and $69.27 a barrel in fiscal year 2017.

Insurance Taxes, Motor Vehicle Sales Taxes and Alcoholic Beverages Taxes are bright spots among an overall dismal picture. It should be noted that March Sales Tax revenue grew 2.07% over prior year, but it could not reverse the YTD negative variance.

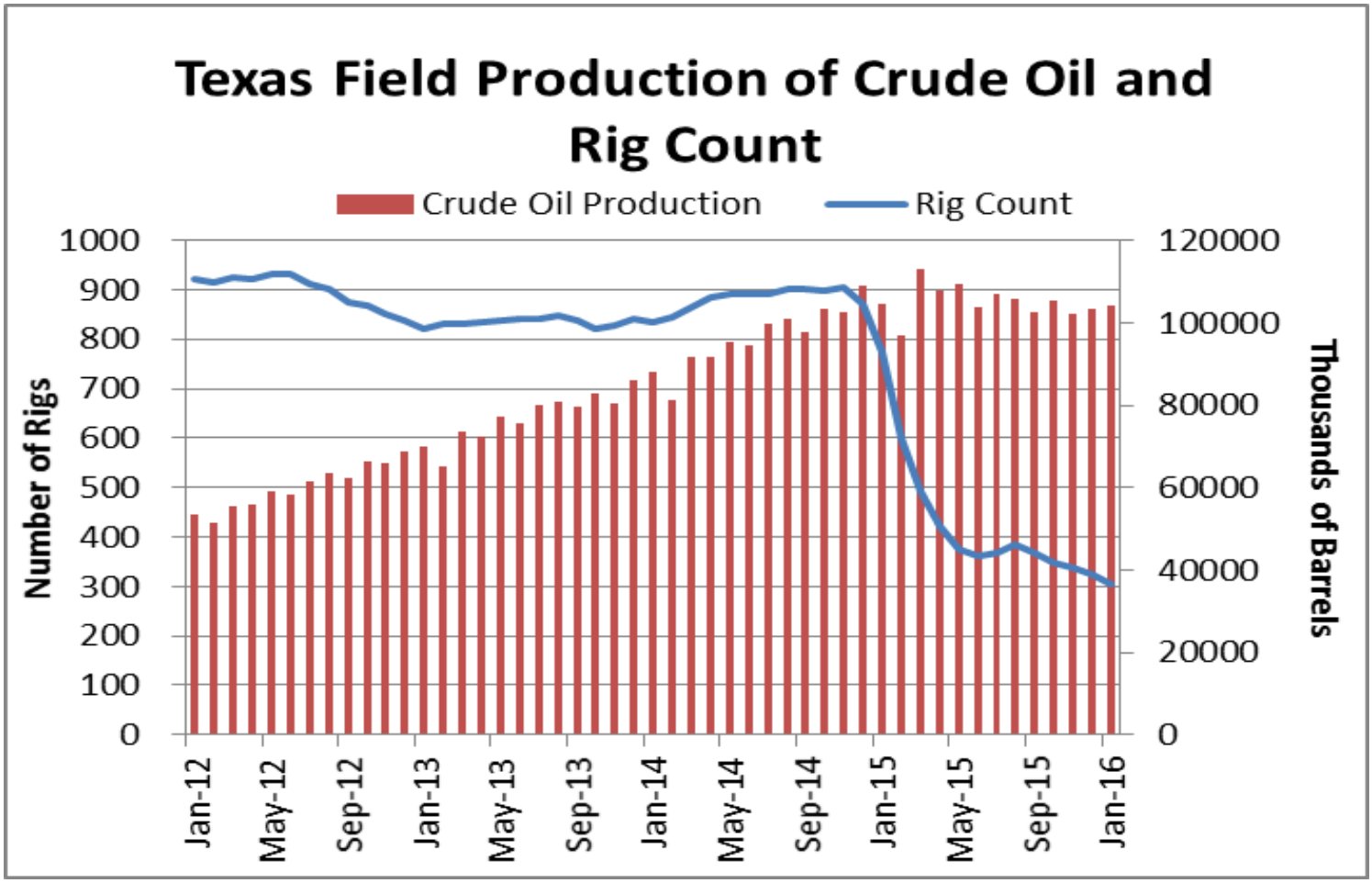
Tax Collections by Major Tax (amounts in millions)	Mar YTD FY 2016	Mar YTD FY 2015	Variance	Percentage Variance
Sales Tax	$ 16,311	$ 16,736	$ (425)	-2.5%
Motor Vehicle Sales and Rental Taxes	2,672	2,628	45	1.7%
Motor Fuel Taxes	528	511	17	3.3%
Franchise Tax	22	(177)	199	-112.2%
Insurance Taxes	1,334	1,204	130	10.8%
Natural Gas Production Tax	395	904	(509)	-56.3%
Cigarette and Tobacco Taxes	396	404	(8)	-2.1%
Alcoholic Beverages Taxes	670	645	26	4.0%
Oil Production and Regulation Taxes	974	1,846	(871)	-47.2%
Utility Taxes1	209	226	(17)	-7.5%
Hotel Occupancy Tax	281	284	(3)	-1.1%
Other Taxes2	56	112	(56)	-50.0%
Total Tax Collections	$ 23,848	$ 25,322	$ (1,474)	-5.82%
Totals may not add due to rounding.				

Source: Texas Comptroller of Public Accounts

OIL AND NATURAL GAS

The Texas Comptroller reported the following:

- Oil and natural gas production tax collections for the first six months of fiscal 2016 were 50% lower than collections during the same period in 2015.
- NYMEX Crude oil futures reached a settle price of $38.34 on March 31, 2016 compared to $47.60 on March 31, 2015. The average crude oil futures settle price was $37.96 for March 2016 as compared to $47.85 in March 2015.
- NYMEX Natural gas futures reached a settle price of $1.96 on March 31, 2016 as compared to $2.64 on March 31, 2015. The average natural gas settle price was $1.81 for March 2016 as compared to $2.75 in March 2015.

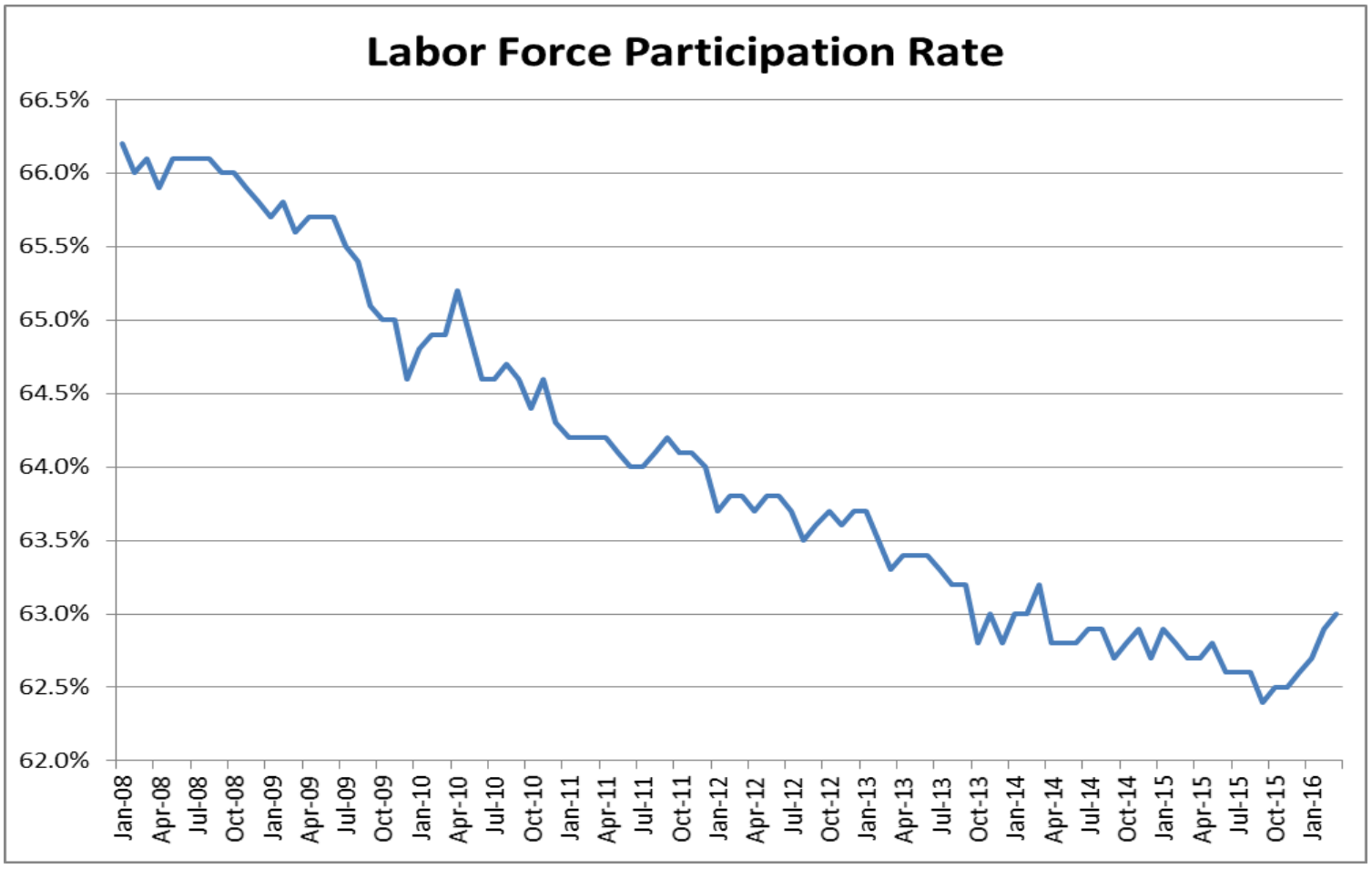


Source: of Data: Baker Hughes and U.S. Energy Information Administration.

LABOR PARTICIPATION RATE

The **labor force participation rate**, as defined by the Bureau of Labor Statistics (BLS), is "the percentage of the population [16 years and older] that is either employed or unemployed [that is, either working or actively seeking work]." As seen in the chart below, the rate has dropped significantly over the years, but has experienced a slight uptick in recent months.

The Dallas Fed noted that "The February labor force participation rate jumped 0.2 percentage points to 62.9 percent. The participation rate has continuously ticked upward since September 2015. The participation rate for prime-age (25 to 54 years) workers edged up in February. **Full-time employment growth has been flat since late 2014 while part-time job growth has picked up in recent months.** Even after discounting the recent pickup in part-time workers as reflecting a stronger-than-usual pickup in temporary holiday hiring, the number of involuntary part-time workers is still high."

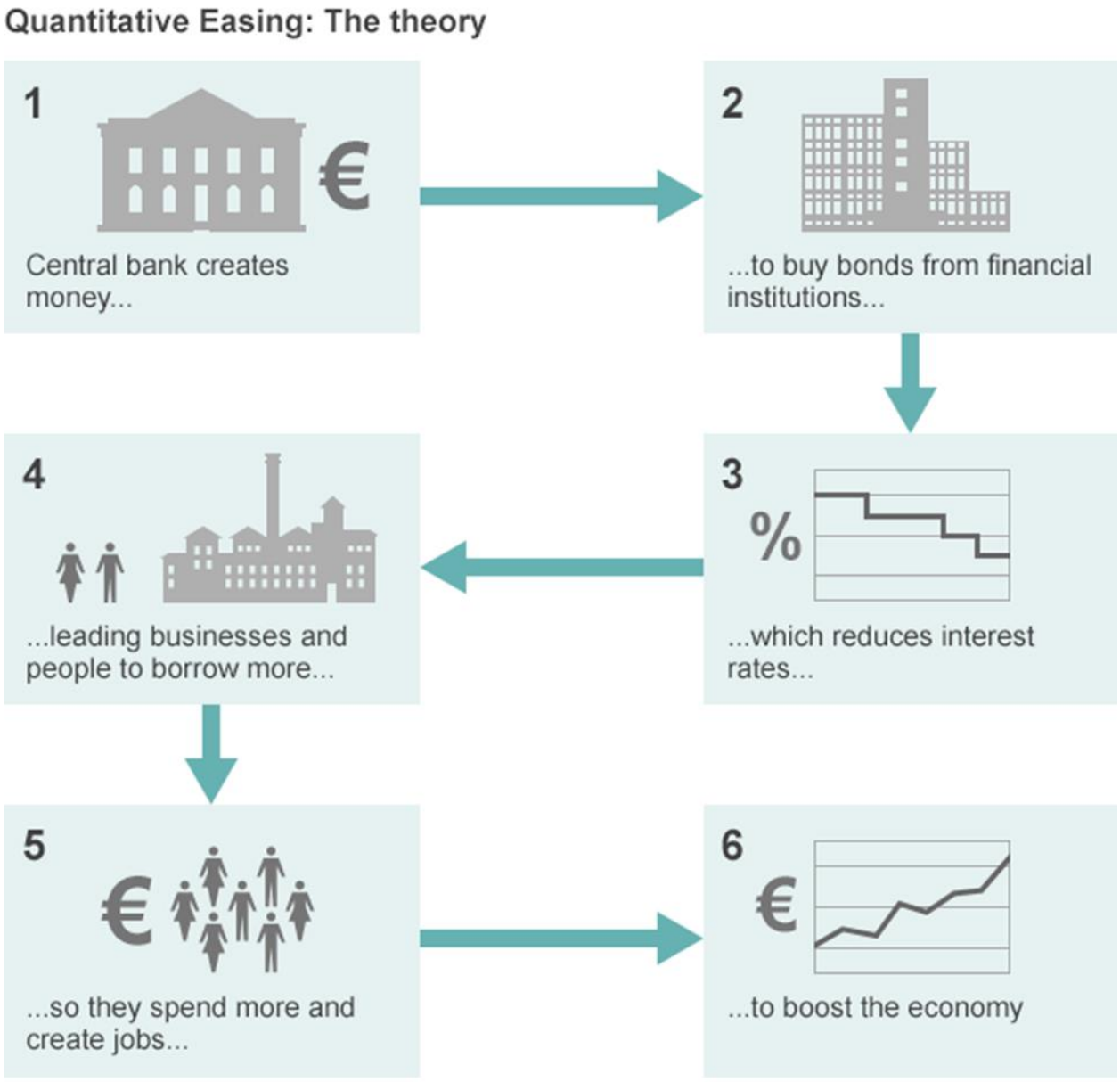


Source of Data: Bureau of Labor Statistics

IN-DEPTH – QUANTITATIVE EASING

WHAT IS QUANTITATIVE EASING?

"Quantitative Easing (QE) is an unconventional form of monetary policy where a Central Bank creates new money electronically to buy financial assets, like government bonds." – Bank of England. This move is meant to lower interest rates and make more money available in the system to encourage financial institutions to lend more to businesses and individuals. Some are concerned that forcing rates lower will create asset bubbles in emerging markets, stocks and housing that will collapse over time. Many believe Fed money creation will spur inflation.



Source of Chart: BBC

IN-DEPTH – QUANTITATIVE EASING

WHY WAS IT INITIATED?

The Central Bank either felt they were out of options or this was the best option to get out of the recession. As The Economist pointed out in March 2015, "When the crisis struck, big central banks like the Fed and the Bank of England slashed their overnight interest-rates to boost the economy. But even **cutting the rate as far as it could go, to almost zero, failed to spark recovery**. Central banks therefore began experimenting with other tools to encourage banks to pump money into the economy." To accomplish this there were three rounds of Quantitative Easing (QE1-QE3).

HOW MUCH MONEY DID THE FED CREATE AND WHAT DID THEY BUY?

David Wessel, a director of the Hutchins Center on Fiscal and Monetary Policy reported "In QE1, announced in November 2008, the Fed purchased $1.75 trillion of long-term Treasuries, mortgage-backed securities [MBS] guaranteed by Fannie Mae and Freddie Mac, and debt of Fannie and Freddie. In QE2, announced in November 2010, the Fed purchased an additional $600 billion in long-term Treasuries to target long-term rates generally. In September 2012, the Fed announced open-ended monthly purchases of $85 billion in agency-backed mortgage backed securities and treasuries known as QE3, and tied these asset purchases to the state of the labor market."

During QE1 through QE3 the Fed created over **$4 trillion** of new money and purchased both government bonds and toxic bank assets. According to Richard Fisher, president of the Dallas Federal Reserve Bank, the Fed [held] more than 30 percent of the stock of outstanding MBS - [Mortgage Backed Securities] and nearly 25 percent of outstanding Treasuries."

HOW MUCH MONEY DID WALL STREET FIRMS MAKE SELLING BONDS TO FED?

Stephen Gandel, a senior editor at Fortune.com cites "a recent study by a Fed economist and one from MIT estimate that Wall Street firms may have made as much as **$653 million** in fees selling bonds to the Fed." "Along with Goldman, the banks that profited the most from QE trading during the period in question were Morgan Stanley MS, Barclays BSC, BNP Paribas BNP.PA, and JPMorgan Chase JPM."

IN-DEPTH – QUANTITATIVE EASING

WHY DID THE FED BUY FANNIE MAE AND FREDDIE MAC DEBT AND MBS?

In August 2014, Norbert Michel, Ph.D., a research fellow at the Heritage Foundation, wrote "A large portion of these QE purchases, however, removed some of the riskiest assets—Fannie's and Freddie's debt and MBS [Mortgage-Backed Securities]—from commercial banks' balance sheets. This fact has led **some to argue that the Fed designed the QE programs as a way to bail out banks**, not merely as a new form of expansionary monetary policy. Regardless of the true intent, the QE programs have been so controversial because they effectively exchanged cash—created out of thin air—for bank assets that had dramatically declined in value. From the perspective of banks, the QEs could be judged a success because the purchases strengthened their financial position. "

"Controversy arises because those assets—including the MBS frequently referred to as "toxic" assets—have not simply disappeared." These "assets are now on the Federal Reserve's balance sheet. Put differently, the Fed now holds trillions of dollars in debt of two insolvent companies as well as the same securities that led to the 2008 financial crisis."

WHAT WAS THE IMPACT OF THE FED PURCHASING GOVERNMENT BONDS?

When the Federal Reserve bought government bonds from the banks, it **removed safe investments from the marketplace while simultaneously driving down yields**. According to the Wall Street Journal, this encouraged "investors to buy assets with higher returns and more risk, such as stocks and corporate bonds." Investors who owned stocks reaped rewards, watching their portfolios grow dramatically from the depths of the bear market. Corporations borrowed money at extremely low rates by issuing corporate bonds. Many used this cheap source of financing not only to expand their business but to refinance old debts, and to buy back their stock.

In a November 2015 Bloomberg article, Simon Kennedy notes "**For every job created in the U.S. this decade, companies spent $296,000 buying back their stocks**, according to the New York-based bank [Bank of America Corp.]"

"An investment of $100 in a portfolio of stocks and bonds since the Federal Reserve began quantitative easing would now be worth $205. Over the same time, a wage of $100 has risen to just $114."

IN-DEPTH – QUANTITATIVE EASING

WHAT HAPPENED TO SAVERS?

Those who spent a lifetime saving for retirement and who invested in certificate of deposits and money market accounts saw their earnings **crushed by near zero percent returns**. Savers who were fearful of converting their life savings into riskier assets such as stocks were harmed disproportionally. According to a March 2015 CNBC Jeff Cox article, savers lost "$470 billion in the 2008-13 period studied, so the number is likely even higher now." They paid a tremendous price given that QE "failed to generate above-trend economic growth or substantial core inflation." – CNBC.

WHAT WAS THE IMPACT ON INFLATION, WAGE GAIN, AND STANDARD OF LIVING?

Discussions continue on whether objectives like inflation, wage gain, and improved standard of living have been positively impacted by the multi-trillion dollar experiment.

In July 2015, Stephen D. Williamson, Vice President of the Federal Reserve Bank of St. Louis wrote a white paper in which he stated, "Further **there is no work, to my knowledge, that establishes a link from QE to the ultimate goals of the Fed - inflation and real economic activity."**

Jeff Cox, Finance Editor for CNBC, wrote in August 2015, "In addition to muted inflation, gross domestic product has yet to eclipse 2.5 percent for any calendar year during the recovery, while **wage gains, and consequently living standards, have been mired around 2 percent or less."**

According to a February 2016 article by Sean Ross, a financial writer and consultant, "Results have been underwhelming." "The U.S. economy, historically, always improves after recessions, so it is incredibly unlikely the economy would not have improved if not for QE." "According to data from the Federal Reserve Bank of Minneapolis, it took 76 months for the economy to gain back all of the jobs lost in the Great Recession. Cumulative increases in gross domestic product (GDP) from 2008-2015 were just 14.2%. Both recovery metrics [jobs and GDP] are the worst, meaning slowest, in modern American history." **"The QE has proven to be a very successful boost to asset prices but a very ineffective policy in terms of productivity and standards of living."**

IN-DEPTH – QUANTITATIVE EASING

WHY DIDN'T THE ECONOMY GROW AS FAST AS EXPECTED?

In August 2014, Norbert J. Michel, Ph.D. expressed the opinion of most, when he wrote that "Instead of creating new money through additional lending, the Fed's QE policies have greatly expanded the amount of *excess* reserves in the banking system. In other words, **banks have mostly decided to hold onto the cash that the Fed gave them** when it executed all those securities purchases. Consequently, it is rather difficult to argue that these Fed policies have done much to expand the economy."

"The fact that **the Fed started paying interest on reserves in October 2008, something it had not previously done, could also explain the buildup in (idle) excess reserves**. This new policy lowered banks' incentive to create more money with new reserve balances because it reduced the cost of holding excess reserves. On the surface, it makes little sense for the Fed to flood the market with trillions in reserves and simultaneously induce banks to forgo using them to make new loans." A possible rationale would be that the Fed is cautious about creating inflation.

WHAT HAPPENS TO THE $4 TRILLION OF ASSETS?

It's uncharted territory and no one really knows. Below are some possibilities, but the list is endless. Most agree that unwinding $4 trillion would be difficult to accomplish without some turbulence. A well documented plan of slow unwinding may be the best course.

If the Fed sells the assets too quickly it would disrupt the market and cause interest rates to soar. This would include the case of simply letting the bonds mature and roll off automatically since as ft.com reports "a third of the Fed's entire Treasury portfolio, about $785bn, [would come due] by the end of 2018."

If the Fed holds the assets and interest rates go up, the assets would lose billions of dollars in value. In addition, in a higher interest rate environment, the banks would want to start loaning out their reserves. To prevent this increase in the money supply and the resulting inflation, the Fed would have to increase bank reserve requirements and/or pay the banks even more interest on their reserves. The government may end paying more in interest to the banks than they receive from the bonds.

IN-DEPTH – QUANTITATIVE EASING

HOW MUCH IS A TRILLION?

The Economist points out that the "Several rounds of QE in America have increased the size of the Federal Reserve's balance sheet—the value of the assets it holds—from less than $1 trillion in 2007 to more than $4 trillion now." This is an enormous sum. To give it some perspective consider that if a person's salary was $40,000 per year it would take 25 years to earn $1 million, 25 thousand years to earn $1 billion, and 25 million years to earn $1 trillion.

DISCLAIMER